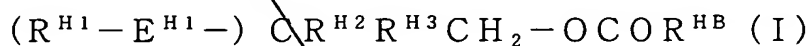


CLAIMS

1. A Process for producing a vic-dichloro acid fluoride  
compound comprising fluorinating the following compound  
(I) in a liquid phase to form the following compound (II),  
5 and dissociating an ester bond of the compound (II) to  
form the following compound (III), or the following  
compound (III) and the following compound (IV):



wherein,

$R^{H1}$ :  $CX^1X^2ClCX^3Cl-$  or  $CClX^4=CCl-$ , wherein each of  $X^1-$   
 $X^4$  is independently a hydrogen atom or a fluorine atom,

15  $R^{H2}, R^{H3}$ : each independently is a hydrogen atom, a  
fluorine atom, a monovalent saturated hydrocarbon group,  
a halogeno monovalent saturated hydrocarbon group, a  
hetero atom-containing monovalent saturated hydrocarbon  
group or a halogeno (hetero atom-containing monovalent  
20 saturated hydrocarbon) group,

$E^{H1}$ : a bivalent connecting group or a single bond,

$E^{F1}$ : a group corresponding to  $E^{H1}$ , and when  $E^{H1}$  is a  
single bond,  $E^{F1}$  is a single bond, and when  $E^{H1}$  is a  
bivalent connecting group having one or more hydrogen  
25 atoms,  $E^{F1}$  is a group corresponding to  $E^{H1}$  wherein at  
least one hydrogen atom is fluorinated, and when  $E^{H1}$  is a  
bivalent connecting group having no hydrogen atom,  $E^{F1}$  is

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the same group as  $E^{H1}$ ,

$R^{HB}$ : a monovalent saturated hydrocarbon group, a halogeno monovalent saturated hydrocarbon group, a hetero atom-containing monovalent saturated hydrocarbon group or  
5 a halogeno(hetero atom-containing monovalent saturated hydrocarbon) group,

$R^{F2}$ ,  $R^{F3}$ ,  $R^{FB}$ :  $R^{F2}$  is a fluorinated  $R^{H2}$  group,  $R^{F3}$  is a fluorinated  $R^{H3}$  group,  $R^{FB}$  is a fluorinated  $R^{HB}$  group, provided that, when one or more hydrogen atom are present  
10 in  $R^{H2}$ ,  $R^{H3}$  or  $R^{HB}$ ,  $R^{F2}$ ,  $R^{F3}$  or  $R^{FB}$  is a group corresponding to  $R^{H2}$ ,  $R^{H3}$  and  $R^{HB}$ , respectively, wherein at least one hydrogen is fluorinated, and when no hydrogen atom is present in  $R^{H2}$ ,  $R^{H3}$  or  $R^{HB}$ ,  $R^{F2}$ ,  $R^{F3}$  or  $R^{FB}$  is a group corresponding to  $R^{H2}$ ,  $R^{H3}$  or  $R^{HB}$  respectively.

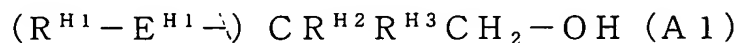
15 2. The process according to Claim 1, wherein a molecular weight of the compound (I) is from 200 to 1000 and the fluorine content is from 30 to 86 mass%.

3. The process according to Claim 1, wherein the fluorination reaction is carried out by feeding an excess  
20 equivalent amount of fluorine relative to hydrogen atoms in the compound (I) into the liquid phase to form the compound (II) from the compound (I) in a liquid phase.

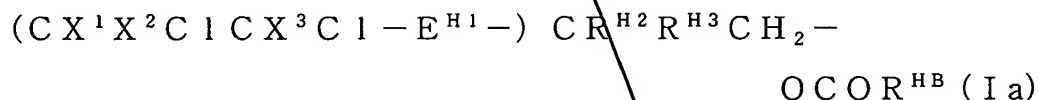
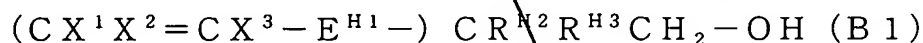
4. The process according to Claim 1, wherein a C-H  
25 bond-containing compound is present in the reaction system of fluorination in a liquid phase, or the fluorination reaction is carried out under radiation of ultra violet ray.

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5. The process according to Claim 1, wherein the compound (I) is produced by reacting the following compound (A1) with the following compound (A2), provided that X is a halogen atom, and R<sup>H1</sup>, E<sup>H1</sup>, R<sup>H2</sup> and R<sup>H3</sup> have the same meaning as in Claim 1.



6. The process according to Claim 1, wherein a compound (Ia), which is the compound (I) wherein R<sup>H1</sup> is CX<sup>1</sup>X<sup>2</sup>ClCX<sup>3</sup>Cl-, is produced by reacting the following compound (B1) with the following compound (B2) to form the following compound (B3), and then reacting the compound (B3) with a chlorinating agent, provided that X<sup>1</sup>, X<sup>2</sup>, X<sup>3</sup>, R<sup>H2</sup>, R<sup>H3</sup> and R<sup>HB</sup> have the same meaning in Claim 1.



7. The process according to Claim 6, wherein the chlorinating agent is chlorine.

8. The process according to Claim 6, wherein the compound (IV) and the compound (B2) are the same compound.

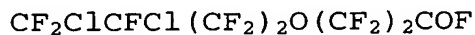
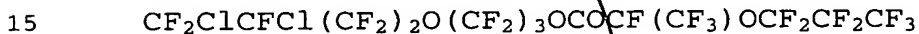
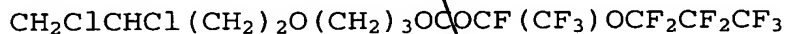
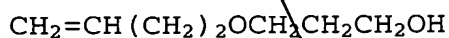
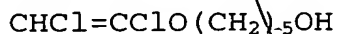
9. The process according to Claim 5, wherein the compound (IV) and the compound (B2) are the same compound and a part or whole of the resulting compound (IV) is used again for the reaction the compound (A1) or the

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compound (B1).

10. The process according to Claim 1, wherein the compound (III) and the compound (IV) are the same compound.

- 5 11. Any one of new compounds represented by the following formulae:



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